Notice of Allowability	Application No.	Applicant(s)	
	10/688,265	CHRISTENSEN ET AL.	
	Examiner	Art Unit	
	John H. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Applicant's amement filed 06/28/2005*.

2. ☒ The allowed claim(s) is/are *1-24*.

3. ☒ The drawings filed on *17 October 2003* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Response to Amendment

1. Applicant's amendment filed 06/28/2005 has been entered and carefully considered.

Claims 1, 2, 7, 8, 14, 15 have been amended..

Claims 21-24 have been added.

Reasons for Allowance

2. Claims 1-24 are allowed.

3. The following is a statement of reasons for the indication of allowable subject matter:

Please see the previous office action and applicant's argument filed on 06/28/2005.

Regarding claim 1, none of the prior art of record teaches or suggests the combination of a method for reducing occurrence of spurs when analyzing signals, wherein when a spur is predicted to occur when the first converter means performs high side mixing and a spur is predicted to occur when the first converter means performs low side mixing, the first converter means determines whether the spur that is predicted to occur when the first converter means performs high side mixing is greater than the spur that is predicted to occur when the first converter means performs low side mixing. When the first converter means determines the spur that is predicted to occur when the first converter means performs high side mixing is greater than the spur that is predicted to occur when the first converter means performs low side mixing, the first converter means performs low side mixing. It is these limitations as they are claimed in the

combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 7, none of the prior art of record teaches or suggests the combination of a signal analyzer, wherein when a spur is predicted to occur when the first converter system performs high side mixing and a spur is predicted to occur when the first converter system performs low side mixing, the first converter system determines whether the spur that is predicted to occur when the first converter system performs high side mixing is lesser than the spur that is predicted to occur when the first converter system performs low side mixing. When the first converter system determines that the spur that is predicted to occur when the first converter system performs high side mixing is lesser than the spur that is predicted to occur when the first converter system performs low side mixing, the first converter system performs high side mixing. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 14, none of the prior art of record teaches or suggests the combination of a signal analyzer, wherein when a spur is predicted to occur when the first converter means performs high side mixing and a spur is predicted to occur when the first converter means performs low side mixing the first converter means determines whether the spur that is predicted to occur when the first converter means performs high side mixing is greater than the spur that is predicted to occur when the first converter means performs low side mixing, wherein when the first converter means determines

the spur that is predicted to occur when the first converter means performs high side mixing is greater than the spur that is predicted to occur when the first converter means performs low side mixing, the first converter means performs low side mixing. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 21, none of the prior art of record teaches or suggests the combination of a method for reducing occurrence of spurs when analyzing signals from a device under test, wherein the signal analyzer by the device under test, is mixed with a local oscillator signal to produce an intermediate signal, wherein when a spur is predicted to occur as a result of high side mixing of the first signal with the local oscillator signal, a first signal, generated external but not as a result of low side mixing of the first signal with the local oscillator signal, low side mixing is performed; when a spur is predicted to occur as a result of low side mixing of the first signal with the local oscillator signal but not as a result of high side mixing of the first signal with the local oscillator signal, high side mixing is performed. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 23, none of the prior art of record teaches or suggests the combination of a signal analyzer that includes an input and a first converter system, wherein the input receives an input signal generated external from the signal analyzer by a device under test, wherein the first converter system includes a first local oscillator

and a first converter, the first local oscillator produces a first local oscillator signal; the first converter mixes the input signal with the first local oscillator signal to produce a first intermediate signal; wherein when a spur is predicted to occur when the first converter system performs high side mixing and not when the first converter system performs low side mixing, the first converter system performs low side mixing, and when a spur is predicted to occur when the first converter system performs low side mixing and not when the first converter system performs high side mixing the first converter system performs high side mixing. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JL

John H. Le

Patent Examiner-Group 2863

July 7, 2005

BRYAN BUI
PRIMARY EXAMINER

7/11/05